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Dates to remember

April 29–May 5:
Native Plant
Appreciation Week

May 25: 2012 Native
Plant Conservation
Initiative (NPCI) grant
pre-proposal deadline
(see p.3)

June 22–24: INPS
Annual Meeting in
North Idaho (see p.6)

July 12–15: 5th Annual
Botanical Foray, Paris
Canyon



IDAHO NATIVE PLANT SOCIETY

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Volume 34 (2)

Articles contributed to
Sage Notes reflect the
views of the authors
and are not an official
position of the Idaho
Native Plant Society.

Milkweeds of Idaho—and Beyond

By Sonja Lewis and James Riser II

Which plant genus has flowers as strange and complex as the orchids? White Pine Chapter was treated to the fascinating details of *Asclepias*, the milkweeds, at its February 23rd meeting by James Riser, who is also chapter president. He presented information from his doctoral studies, giving us the lowdown on milkweeds' diverse locales, insect interactions, differing plant morphologies, surprising reproductive structures and strategies, and interesting relatives.

The milkweed family, formerly known as Asclepidaceae, is now in the Apocynaceae, which also includes *Apocynum androsaemifolium*, spreading dogbane, which is common locally. Many milkweed species are showy, including some of the six that are native to Idaho. All are intriguing!

The *Asclepias* genus (milkweed) is known for its milky sap, the silky-haired parachutes attached to its seeds, and as being the essential food of monarch butterfly larvae. Indeed only the native milkweeds, not the introduced ones, can sustain monarch larvae and enable the build-up of toxic cardiac glycosides that cause birds and other vertebrates to avoid the adult butterfly. In the Midwest, where native milkweeds are declining, so are monarch populations. Additionally, New York state has been invaded by two Eurasian vining milkweed species which will not sustain monarchs. *Asclepias* plants are not fatal to livestock unless eaten in quantity. They have a very unpleasant taste, and therefore cows won't willingly eat them.

The Americas, from South America to southern Canada, are home to milkweeds, with Mexico being the center of *Asclepias* diversity. Related genera are also found in Africa and Eurasia. Milkweeds grow in deserts, grasslands, and forests, most often in full sun. They are perennials, usually with opposite leaves. Some species are found on disturbed land, and are able to persist.

Asclepias flowers are aggregated into rounded inflorescences termed umbels. The *Asclepias* flower is highly complex, although there's nothing too out of the ordinary about the outer structures. The five petals of the variously colored corolla usually fold back over the green sepals. There are two separate ovaries, each with its own style. But now it gets hard to follow!

Moving towards the center of the flower, one finds the gynostegium, which is composed of the two fused stigmas adnate to the five fused anthers. The showy portions of the gynostegium are called a corona. The *Asclepias* corona resembles hoods, horns, or sacs, with nectaries at the bottom. The receptive areas for pollen (the stigmas) are hidden under the flap-like anthers.

(Above) The beautiful Swamp milkweed (*Asclepias incarnata*) found in Idaho and Utah is also common in the eastern U.S. Photo: James Riser II

Continued on p.4

IDAHO NATIVE PLANT SOCIETY

Address: P.O. Box 9451,
Boise, ID 83707

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info3@idahonativeplants.org

Web site:
www.idahonativeplants.org

INPS BOARD MEMBERS

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Greetings from the President

Dear Idaho Native Plant Society Members,

Spring is such an exciting time! Our gardens are showing their first blooms and our natural areas are awakening with new growth, buds and blooms. We all look forward to another year of viewing, photographing and studying Idaho's amazing native plants. There are many ways that we can share our enthusiasm for these wonderful plants. Please note the following:

1. At our request Governor Otter has proclaimed April 29 through May 5, 2012 as Native Plant Appreciation Week. That proclamation is on our website and can be sent as a pdf, if it needs to be posted. We can share our appreciation for native plants by making known Native Plant Appreciation Week to our neighbors, friends and associates, by participating and inviting others to planned events and by posting the proclamation where appropriate.
2. Another way of sharing our enthusiasm for native plants is to share our knowledge and experiences by writing articles for Sage Notes. Scientific articles are very much appreciated, but articles about a special field trip, a special place, a newly published book, an especially nice garden featuring native plants or about an individual who has been especially effective in educating the public about native plants are all examples of other types of articles that would also be of interest to our INPS membership. Also, if you have ideas of articles you would like to see in Sage Notes, don't hesitate to contact the editor or a member of the INPS board.
3. INPS has a number of committees which need additional members. We would appreciate volunteers coming forward and expressing interest in serving. Chapters are also often in need of help. Please help us all by volunteering either at the chapter or state level.
4. The special treat this year will be the INPS annual meeting at Clark Fork Drift Yard, Clark Fork, Idaho. The Calypso chapter has prepared an exciting conference for us. The INPS Board meeting will be held from 8:00 a.m. to 9:30 a.m. Sunday morning at the Clark Fork Senior Center. This meeting is open to all who may be interested in the workings of the INPS Board.
5. Our website at www.idahonativeplants.org has seen a number of changes recently and more changes are planned. Please check the website for current events, annual meeting information and registration forms in addition to all of other helpful information.

We'll see you at Clark Fork in June. Have a great spring!

Lamar Orton
INPS President

Have you heard? INPS is now on Facebook!



Like our page to receive updates on chapter events and happenings from around the state. View our page at: <https://www.facebook.com/IdahoNativePlants>

Editor's note:

On p.17 of the printed version of the February 2011 issue of *Sage Notes* we attributed the article "Idaho's Natural Heritage Program botanists and the assessment of our rarest plants" to Danielle L. Clay. We should also have included Justin R. Fulkerson as co-author of the article. This was corrected in the web PDF file, but we wanted to extend our apologies to the authors in print!

Sage Notes is a publication of the Idaho Native Plant Society Vol. 34 (2) May 2012

INPS State News

Native Plant Appreciation Week

Idaho celebrates Native Plant Appreciation Week April 29 – May 5. At our request, Governor Butch Otter issued a proclamation which can be read on the [INPS state website home page](#). Chapters will be scheduling events in conjunction with this celebratory week. There may also be some events which are scheduled in adjacent weeks.

October 2011 Idaho Rare Plant Conference follow-up

As follow-up to the October 2011 Idaho Rare Plant Conference, a committee was formed to review the system that assigns conservation ranks to species on the INPS rare plant list. The Rare Plant Ranking Steering Committee will make a recommendation to the INPS Board regarding any possible modifications to the existing ranking process.

—Beth Colket [ecolket at yahoo dot com](mailto:ecolket@yahoo.com)

Astragalus Workshop: Save the date!

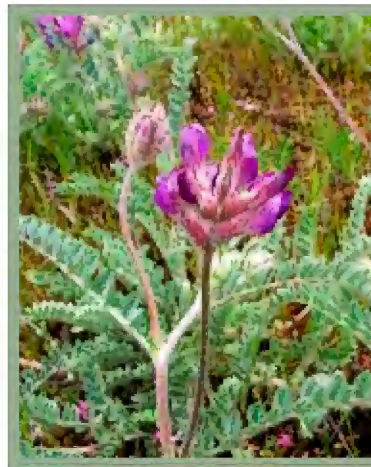
When: June 27-28, 2012

Where: College of Idaho in Caldwell, Idaho

The Pahove Chapter of the Idaho Native Plant Society and the College of Idaho are proud to offer another plant identification workshop.

This year's two-day workshop will focus on members of the genus *Astragalus* and will be led by Idaho's very own Michael Mancuso and Don Mansfield. Please join us as we listen and learn via lecture, lab, and field trips!

Contact: Karen Colson at [karen_colson at fws dot gov](mailto:karen_colson@fws.gov) if you would like to receive registration information. Cost will be \$50.00 and includes lunch both days!



Hells Canyon *Astragalus*—can you identify the species? Photo is from Pittsburg Landing. Photo: Jane Rohling

2012 Native Plant Conservation Initiative (NPCI) grant

The National Fish and Wildlife Foundation (NFWF) is soliciting proposals for the 2012 Native Plant Conservation Initiative (NPCI) grant cycle. The NPCI grant program is conducted in cooperation with the Plant Conservation Alliance (PCA), a partnership between the Foundation, ten federal agencies, and more than 275 non-governmental organizations. PCA provides a framework and strategy for linking resources and expertise in developing a coordinated national approach to the conservation of native plants. Since 1995, the NPCI grant program has funded multi-stakeholder projects that focus on the conservation of native plants and pollinators under any of the following 6 focal areas: conservation, education, restoration, research, sustainability, and data linkages.

The deadline for pre-proposals is May 25, 2012. See <http://www.nps.gov/plants/nfwf/> for more information about the grant programs including the full request for proposals.

Paid your dues yet? If you haven't renewed your INPS membership for 2012, please do so as soon as possible. We rely heavily on your dues to keep our programs and activities going!

Sage Notes, the newsletter of the Idaho Native Plant Society, is published in February, May, September, and December.

Current and recent past issues of *Sage Notes* are posted in full color online at www.idahonativeplants.org/news/Newsletters.aspx along with a searchable index of 2006–2010 issues. We are scanning and uploading older issues as time allows.

Submissions: Members and non-members may submit material for publication. Relevant articles, essays, poetry, news and announcements, photographs and artwork are welcome. Authors, artists, and photographers retain copyright to their work and are credited in *Sage Notes*. Send all submissions electronically to the editor at the link below.

Submission guidelines are posted on the INPS web site: www.idahonativeplants.org/news/Newsletters.aspx. Please provide a phone number and/or email address with your submission. Submission deadlines are January 8, April 1, August 1, and November 1.

Advertising: Advertisements help reach environmentally-minded, native-plant-loving customers and help support INPS. Prices: 1/8 page = \$5, 1/4 page = \$8, 1/2 page = \$15. Submit ads to the editor electronically (JPEG, TIFF, PSD, or PDF files).

Send payment to:
Sage Notes Ads,
P.O. Box 9451,
Boise ID, 83707

Sage Notes editor:
Jane Rohling, sage-editor@idahonativeplants.org
Phone: (208) 938-3529

“Within the sagebrush steppe, no other genus contains as many species as *Astragalus*, many very similar and difficult to distinguish.”

—Sagebrush Country,
by Ronald J. Taylor

Milkweeds of Idaho—and Beyond *(continued from p.1)*

(Below) White-lined sphinx moth (*Hyles lineata*) sipping nectar from an Idaho milkweed.
Photo: James Riser II

As in orchids, the pollen is clumped together, allowing dozens to hundreds of seeds to be fertilized. Essentially, one pollination event leads to numerous seeds being produced. This pollination strategy has a couple of benefits: pollen is not wasted being shed into the wind and a single pollination event will fertilize all of the many seeds in a single ovary. The pollen is enclosed in two sacs which are connected by a short, but very sticky linking structure, the corpusculum. The compound structure is known as a pollinium. The pollinium becomes attached to a visiting insect (usually to a leg), and if the visitor is large enough, the pollinium will be yanked free of its resting spot within the anthers when the insect leaves the flower.

Wasps, butterflies, and honeybees are the most common pollinators. As the insect flies to another flower the pollinium dries out slightly and changes shape in order to facilitate pollination

at the next flower. When the insect visits another milkweed flower, the trailing pollinium gets stuck in the narrow triangular stigmatic slit, and thus it becomes wedged against the stigma. Voila! Pollination occurs, and the pollen tubes rapidly commence growing towards the soon-to-be seeds.

The *Asclepias* show didn't stop with Idaho's species. James shared slides and information on at least 16 other species found elsewhere in the American West. The other native species of the West vary in height from 6 inches to 5 feet. A Sonoran desert species drops its leaves, leaving only the stem to conduct photosynthesis. Substrates range from moist soils to gritty sand, serpentine soils, and the Midwest's sand blowouts. There are many fascinating adaptations here!

"The *Asclepias* genus (milkweed) is known...as being the essential food of monarch butterfly larvae. Indeed only the native milkweeds...can sustain monarch larvae and enable the build-up of toxic cardiac glycosides that cause birds and other vertebrates to avoid the adult butterfly. In the Midwest, where native milkweeds are declining, so are monarch populations."



Six *Asclepias* native to Idaho

Photos: James Riser II

Antelope horns

(*Asclepias asperula*)

Beautiful deep-red coronas. Found in southern Idaho, especially in the Preston area.

Pallid milkweed

(*Asclepias cryptoceras*)

Found on clay or gravelly soils in southwestern Idaho (Owyhees) to Utah. Also in Asotin, WA.

Narrow-leaved milkweed

(*Asclepias fascicularis*)

Widespread in West. Locally, in Idaho's western Panhandle and Columbia River Gorge, WA. Very weedy.

Swamp milkweed

(*Asclepias incarnata*)

A very pretty milkweed. Common in eastern U.S., also found in Idaho, but more in Utah.

Showy milkweed

(*Asclepias speciosa*)

Idaho's most common species. Found from central Kansas westward. Up to 1 meter tall. Flowers in late summer, fragrant. Corona is in the shape of horns, and contains nectaries. Each inflorescence usually grows only one follicle (seed pod).

Poison milkweed

(*Asclepias subverticillata*)

A weedy species with small white flowers and narrow leaves.



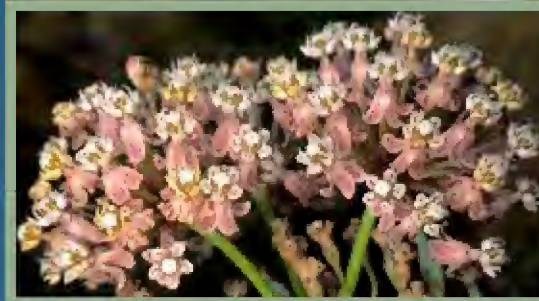
◀ *A. asperula*



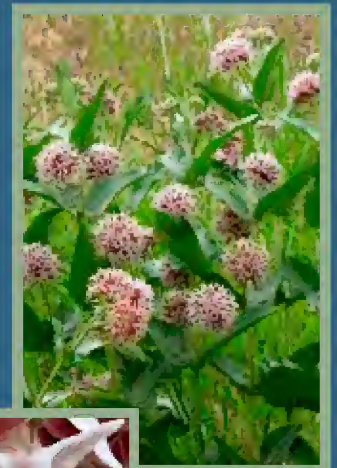
◀ *A. cryptoceras* ▶



◀ ▶
A. fascicularis



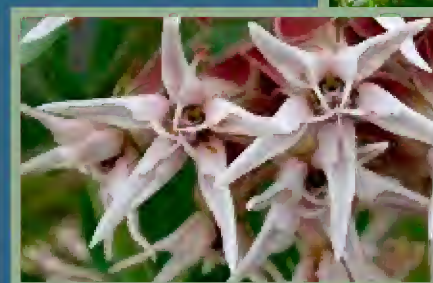
▶ *A. incarnata*



◀ ▶
A. speciosa



◀ *A. subverticillata*



The INPS Annual Meeting will be hosted by the Calypso Chapter, June 22–24, 2012.

(Below) The majestic western red cedar (*Thuja plicata*) trees of Ross Creek are 175 feet tall and 8 feet in diameter. Many are 400 years old! Photo: Susan Lee



(Right) Ross Creek Falls—a great place on a hot summer day. Photo: Susan Lee

2012 Annual meeting updates

By Derek Antonelli, President, Calypso Chapter

Photos by Susan Lee

The Calypso Chapter will be hosting the 2012 Annual Meeting at the Clark Fork Drift Yard near the town of Clark Fork, about twenty miles east of Sandpoint on June 22, 23 and 24. The full details of the event and a registration form were covered in the February 2012 issue of Sage Notes and can also be found on the Idaho Native Plant Society's website: www.idahonativeplants.org.

The event highlights efforts to restore damaged wetlands in the Pack River and Clark Fork River deltas entering Lake Pend Oreille. At the Saturday evening program, Kathy Cousins of Idaho Department of Fish and Game will describe the Pack River Delta Restoration Project and how the lessons learned from that effort can be applied to the restoration of the much larger Clark Fork River delta. Daytime activities on Saturday will include half day tours of the Pack River Delta Restoration Project area as well as half day and all day hikes into the proposed Scotchman Peaks Wilderness Area. An optional Sunday activity will include a trip to see the Ross Creek Cedar Grove in nearby Montana.

The Annual Meeting is approaching fast! Be sure to get your registration forms in as soon as possible. It will really help us out in our planning processes. The cost of the event is only \$10 per participant. The Saturday evening meal is an additional \$10.

Questions? Contact Derek Antonelli, 208-762-2575 or antonelli8@frontier.com.

Abbreviated Schedule of Activities

Friday, June 22

8:00 a.m.–evening

Participant arrival

8:00 a.m.–6:00 p.m.

Informal activities

2:00 p.m.–evening

Check-in

6:00 p.m. “Rock Soup” potluck.

Bring something to add to the pot!

7:00 p.m. Campfire with Friends of Scotchman Peaks Wilderness

Saturday, June 23

8:00 a.m.–12:00 noon

Tour of Pack River Delta

8:00 a.m.–12:00 noon

Morris Creek hike

8:00 a.m.–5:00 p.m.

Scotchman Peak hike

1:00–5:00 p.m.

Tour of Pack River Delta.

1:00–5:00 p.m.

Morris Creek hike

6:00–7:30 p.m.

Dinner meal

7:30–9:00 p.m.

Annual meeting and presentation

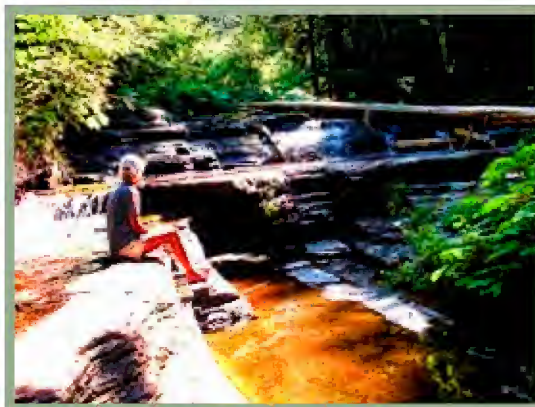
Sunday, June 24

8:00 a.m. to 9:30 a.m.

INPS board meeting

8:00 a.m. to 2:00 p.m.

Caravan to Ross Creek Cedar Grove



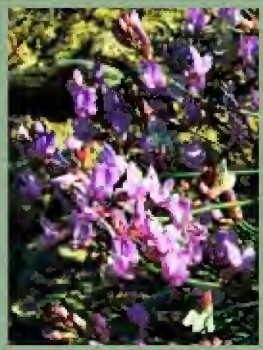


Devil's club (*Oplopanax horridus*) is prolific along Ross Creek.
Photo: Susan Lee

For more information on the Annual Meeting, and a registration form, see the last issue of *Sage Notes* (Feb. 2012), or visit the INPS website: www.idahonativeplants.org



Marten sets were cut in the trees when the Hudson Bay fur trader Alexander Ross led a party of trappers into the forest west of Thompson Falls, Montana, around 1824. They can still be viewed today as large triangles cut into the cedar trees. Snowshoe hares, martens and other animals would seek refuge from the deep snow and be caught.
Photo: Susan Lee



(Above and below right) *Astragalus cusickii* v *packardiae* sports delicate lavender flowers.

Photos: Michael Mancuso

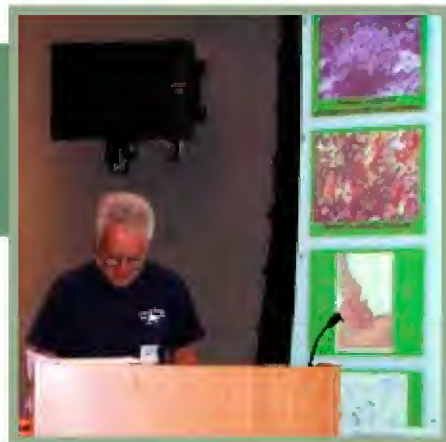
Meet Packard's milkvetch: one of Idaho's rarest plants

By Michael Mancuso

If you've never seen Packard's milkvetch (*Astragalus cusickii* var. *packardiae*)—well, join the club, because it is one of the rarest species in the Idaho flora. Its name honors Dr. Patricia Packard, who taught botany at College of Idaho for many years, and co-discovered the species on May 18, 1980—a date renowned for the eruption of Mount St. Helens in Washington State. This plant is an erect perennial that grows to approximately 15 inches tall, with sparse foliage, light-purplish petals, and pendulous, inflated, lustrous, often red-mottled fruit pods that can be striking.

The known distribution of Packard's milkvetch is limited to an approximately ten square mile area in northeastern Payette County, Idaho, where it occurs on light-colored, sparsely vegetated sedimentary outcrops. These visually distinct habitats are sporadic across a former shrub-steppe landscape greatly modified by wildfires and livestock grazing. The entire range of the species is now dominated by annual grassland vegetation. Outcrops supporting Packard's milkvetch range from <0.1 to approximately 3 acres in size, and contain anywhere from <10 to several hundred plants. Wildfire, off-road motorcycle hill climbing, and livestock use are documented disturbances at multiple sites.

In November 2010, the U.S. Fish and Wildlife Service (USFWS) added Packard's milkvetch to their Candidate list, a category for species being reviewed for possible listing under the



(Above) Michael Mancuso discusses *Astragalus cusickii* v *packardiae* at the 2011 Rare Plant Conference.

Photo: Lynn Kinter



Endangered Species Act. Conservation concern for Packard's milkvetch is based on its limited geographic distribution, small population size, habitat decline, and vulnerability of its habitat to multiple, ongoing disturbances and threats.

Packard's milkvetch is most often associated with an open xeric sagebrush (*Artemisia tridentata* ssp. *xericensis*) plant community. Scattered individuals of other shrubs such as antelope bitterbrush (*Purshia tridentata*), gray rabbitbrush (*Ericameria nauseosa*), and four-wing saltbrush (*Atriplex canescens*) are sometimes intermixed. Introduced annual grass and forb species tend to be substantially less common on the outcrops compared to the surrounding sea of weedy vegetation. Helping to add diversity and color, Packard's milkvetch outcrops contain a variable mix of several other wildflower species that may include pallid milkweed (*Asclepias cryptoceras*), monardella (*Monardella odoratissima*), hoary chaenactis (*Chaenactis douglasii*), Oregon sunshine (*Eriophyllum lanatum*), long-leaf phlox (*Phlox longifolia*), golden spiderflower (*Cleome platycarpa*), freckled milkvetch (*Astragalus lentiginosus*), and strict buckwheat (*Eriogonum strictum*).

Conservation actions for Packard's milkvetch in recent years have included field surveys to better document the species' distribution, and establishment of a long-term monitoring program to provide population, habitat, and disturbance trend information. Monitoring data are intended to help guide proactive and adaptive land management conservation efforts. One of the conservation issues highlighted by recent monitoring is the widespread disturbance caused by off-road motorcycle riders on outcrops supporting Packard's milkvetch. In response to this information, the BLM, USFWS, and local private landowners cooperated to temporarily close much of the Packard's milkvetch habitat area to motorized vehicles in June 2011. A more permanent solution to this conflict will be addressed by a mix of government agencies, private landowners, and user groups.

Idaho is home to many wonderful native wildflowers. Packard's milkvetch happens to be one of the more elusive, but you have now been properly introduced.

(Below left) The known distribution of Packard's milkvetch is limited to an approximately 10 square mile area in northeastern Payette County, Idaho, where it occurs on light-colored, sparsely vegetated sedimentary outcrops. Note the annual grassland vegetation that surrounds the outcrop. Photo: Michael Mancuso



Digitizing Herbarium Specimens at the University of Idaho Stillinger Herbarium and the Consortium of Pacific Northwest Herbaria

By Ben Legler¹ and David C. Tank²

The Consortium of Pacific Northwest Herbaria (<http://www.pnwherbaria.org/>) provides an online portal to herbarium specimen data for the over 3.6 million specimen records that are housed within the 57+ herbaria in Alaska, Idaho, Montana, Oregon, Washington, and the Canadian provinces of British Columbia and the Yukon.

In June of 2010, a collaborative \$1.3 million grant from the National Science Foundation was awarded to the University of Idaho (ID), University of Washington (WTU), Oregon State University (OSC), and Montana State University (MONTU) to image, database, and put online herbarium specimens from our region. Our new website, funded by the grant, currently provides access to over 1.7 million specimen records and 174,000+ high-resolution images from 13 herbaria, making it the most comprehensive source of herbarium specimen data for the Pacific Northwest. Data for vascular plants, bryophytes, algae, lichens, and fungi are available for nearly all of the major herbaria in our region and a growing portion of the smaller herbaria.

A redesigned specimen search page (<http://www.pnwherbaria.org/data/search.php>) contains many features besides basic text searches, including map-based searches, images of specimen sheets, and numerous options for filtering, displaying, and downloading data.

(Right) The search interface allows for searches on a diversity of terms including taxonomic names, year, locality, county, etc., and searches filtered by herbarium collection.

1 University of Washington Herbarium, Burke Museum of Natural History, University of Washington, Seattle WA

2 College of Natural Resources & Stillinger Herbarium, University of Idaho, Moscow ID



Search by Location:

Zoom in, click "Create Polygon", then click your mouse to draw a polygon around the area you want to search.

Create Polygon Remove Polygons



Users can designate geographic searches by drawing polygons.

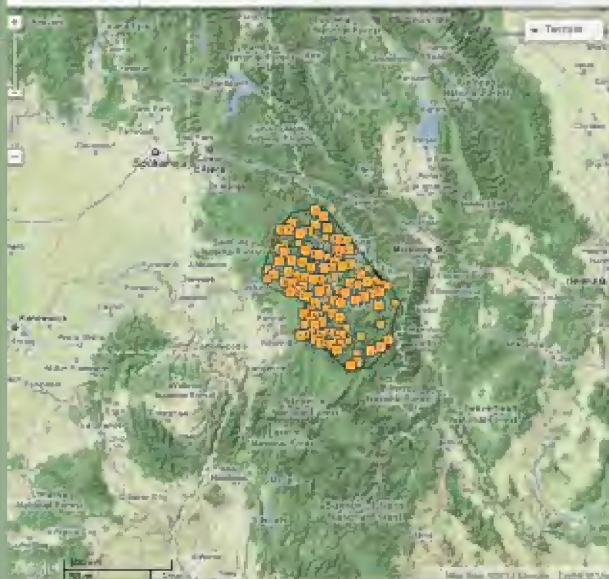
Consortium of Pacific Northwest Herbaria

Building a digital herbarium for the Pacific Northwest

Home Specimen Data Online Resources Member Herbaria External Links Documentation News About Contact Us

« Browse « Search

3398 matching herbaria found, 3021 records displayed on map.
Polygons: 1 polygon defined. Set By: Search criteria. Options: include custom specimens



115. <i>Adiantum aleuticum</i> (Rupr.) C.A. Paris	Plantaceae	
U.S.A., Idaho, Blaine County	Nez Perce National Forest, Rafters Campground, 400m above road at Three Rivers	
Base 1925 ft	48° 5' 0" N, 113° 35' 30" W, TSH ASE 521 NW 1/4	
Thick pine forest, Adiantum aleuticum forest. Occasional with Prunus virginiana, Phlox subulata, and Acer glabrum. Reproductive state. Fertile.		
Parvula Brook Rd 3852	Jun 1, 2005	ID-14481
With Mark Parks and Herb. Gonsalves		
116. <i>Adiantum aleuticum</i> (Rupr.) C.A. Paris	Plantaceae	
U.S.A., Idaho, Blaine County	Nez Perce National Forest, Rafters Campground, 400m above road at Three Rivers	
Base 1925 ft	48° 5' 0" N, 113° 35' 30" W, TSH ASE 521 NW 1/4	
Thick pine forest, Adiantum aleuticum forest. Occasional with Prunus virginiana, Phlox subulata, and Acer glabrum. Reproductive state. Fertile.		
Parvula Brook Rd 3852	May 28, 2006	ID-14485
J.F. Smith		
117. <i>Adiantum aleuticum</i> (Rupr.) C.A. Paris	Plantaceae	
U.S.A., Idaho, Blaine County	Nez Perce National Forest, Rafters Campground, 400m above road at Three Rivers	
Base 1925 ft	48° 5' 0" N, 113° 35' 30" W, TSH ASE 521 NW 1/4	
Thick pine forest, Adiantum aleuticum forest. Occasional with Prunus virginiana, Phlox subulata, and Acer glabrum. Reproductive state. Fertile.		
Parvula Brook Rd 3852	Jul 20, 2002	ID-121902
Karen L. Gray		
With Barry Gonsalves, J.F. Smith		
118. <i>Adiantum aleuticum</i> (Rupr.) C.A. Paris	Plantaceae	
U.S.A., Idaho, Blaine County	Nez Perce National Forest, Rafters Campground, 400m above road at Three Rivers	
Base 1925 ft	48° 5' 0" N, 113° 35' 30" W, TSH ASE 521 NW 1/4	
Thick pine forest, Adiantum aleuticum forest. Occasional with Prunus virginiana, Phlox subulata, and Acer glabrum. Reproductive state. Fertile.		
Parvula Brook Rd 3852		

Results include mapped locality data as well as thumbnails with links to high-resolution images.

The built-in image viewer enables easy zooming and panning on the high-resolution images and the ability to take measurements.

Specimen images are viewable online at full resolution and serve as a new digital reference for the Pacific Northwest. You can also create checklists for counties in the region or any arbitrary geographic region, and more features are in development, including mobile-optimized content to allow access to data and images in the field on a smart phone or tablet.



At the University of Idaho Stillinger Herbarium, we are imaging and databasing our vascular plant collection of more than 165,000 specimens, as well as specimens from several smaller herbaria in the region, including collections at Lewis-Clark State College, North Idaho College, and several Forest Service herbaria in north Idaho. Currently, we have imaged over 140,000 specimens and databased almost 95,000 of them.

By the end of this 3-year grant, the consortium will have acquired images for more than 350,000 specimens from at least 12 different herbaria, including many smaller collections, and databased these plus another 200,000 specimens of bryophytes, lichens, and fungi. Combined with existing data from other contributing herbaria, the total number of specimens accessible through our online portal may well exceed 2 million!

Please visit our website for more information about the project or to search our extensive collections. (<http://www.pnwherbaria.org/data/search.php>)

Plantasia Cactus Gardens

Large selection of Idaho
& Great Basin native plants.
Cold-hardy cacti, yuccas,
nolinas and other succulents.

Our 5-acre drought-tolerant
botanical garden is open by
appointment April 1-Nov. 15.

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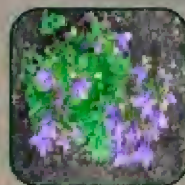
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INPS Chapter News

INPS CHAPTERS

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821 W. Mustang Ave.
Hayden, ID 83835

President: Derek Antonelli
Vice President: Vacant
Secretary: Karen Williams
Treasurer: Janet Benoit
Newsletter: Vacant

LOASA CHAPTER

340 E 520 N.
Shoshone, ID 83352

President: Kelvin Jones
Vice President: LaMar Orton
Secretary/Treasurer:
Lois Rohay

PAHOVE CHAPTER

P.O. Box 9451
Boise, ID 83707
Pahove.chapter@gmail.com

President: Karie Pappani
Vice Pres.: Elaine Walker
Secretary: Susan Ziebarth
Treasurer: Caroline Morris
Conservation: Justin Fulkerson
Members at Large:
Cyndi Coulter, Karen Colson,
Chris Colson, Jody Hull

SAWABI CHAPTER

146 South 17th Ave. Pocatello,
ID 83201

President: Ardys Holte
Vice Pres.: Bob & Chris McCoy
Secretary: Barbara Nicholls
Treasurer: Cathy Frischmann
News to members: Linda Johnson
Chapter News: Ardys Holte
Web site: Catalina Steckbauer
Hospitality chair: Pauline Havens
Conservation/Education
chair: Janet Bala
Members-at-large: Mel Nicholls,
Karl Holte, Dick Anderson,
Judy Minshall

CALYPSO CHAPTER

When: Our next Calypso Chapter meeting will be held at 7:00 p.m. on Wednesday, May 2. Planning for 2012 INPS Annual Meeting will be one of the topics.

Where: Conference room of Idaho Department Fish and Game, 2885 W. Kathleen Ave., Coeur d'Alene, ID 83815

Contact: Derek Antonelli for more information: antonelli8@frontierdotcom

UPCOMING EVENTS:

May hike: Dishman Hills, dates and times to be determined.

June 9: Chapter preview hikes of Morris and Regal Creeks in preparation for Annual Meeting. Meet at NE corner of Hayden WalMart parking lot at 7:30 a.m.

June 22-24: 2012 INPS Annual Meeting, Clark Fork Drift Yard. See INPS website for details and [page 6](#).

July 21: Marie Creek Hike Meet in the parking lot behind Coeur d'Alene Walgreen's at 9:30 a.m.

August 18: Stevens Lake Hike near Wallace Meet in the parking lot behind Coeur d'Alene Walgreen's at 7:30 a.m.

LOASA CHAPTER

All INPS members and the public are welcome to attend chapter events.

When: Meetings are held the third Thursday of each month

Where: Taylor Building, Room 258, College of Southern Idaho

Contact: Kelvin Jones at (208) 886-7051 for more information

PAHOVE CHAPTER

When: Meetings are held on the 2nd Thursday of each month from September–April. Topics are emailed and posted on the Idaho Native Plant Society website. Meetings are not held from May–August. Join us in September when the monthly meetings begin for a new season. Enjoy your summer!

Where: Meetings are usually held at the MK Nature Center Auditorium.

Contact: For more information about Pahove Chapter activities visit the website: www.idahonativeplants.org or email Karie Pappani at pahove.chapter.president@gmail.com.

UPCOMING EVENTS

INPS Pahove Chapter 2012

Native Plant Sale, April 27–28

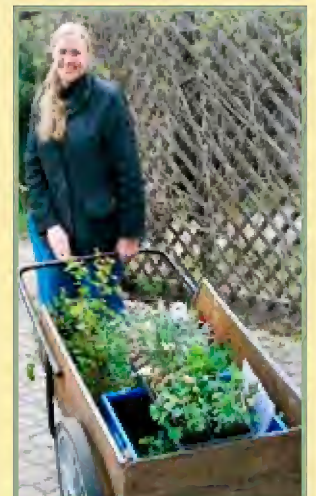
Friday, 5:00–7:00 p.m.

INPS Members Only Sale You may renew your membership at this sale. This Friday sale gives INPS members the opportunity to get first pick of the plants. There will be about 15 new species this year that have not been offered at our previous annual plant sales. Stay tuned to the INPS website for a 2012 plant availability list!

Saturday, 10:00 a.m.–1:00 p.m.

Native Plant Public Sale We planned our sale to coincide with Arbor Day. Join us in celebrating this national holiday by planting a tree or shrub in your yard.

The 2012 sale will offer Rocky Mountain maple (*Acer glabrum*) as its featured tree, which may also be grown as a large shrub. Widely adaptable, Rocky Mountain maple is native to open slopes and woodland understory throughout Idaho. With an airy, graceful form, it grows to about 20 feet in height and is ideal for vertical character in urban landscaping. Tolerant of full sun to light shade, it requires average to well-drained soils and moderate to low moisture. Fall color can be striking and reddish bark maintains winter interest.



April 29–May 5: Celebrate Native Plant Appreciation Week by bringing some adaptable native plants back to your home.

SAWABI CHAPTER

Meetings: We welcome the public to our chapter's informative programs.

When: First Monday of each month, October through March, 7:00 p.m.

Where: Pond Student Union Building, Room 308, ISU Campus, Pocatello.

Contact: For more information call 208-716-0218.

UPPER SNAKE CHAPTER

When: Meetings are usually held the 3rd Wednesday of the month at 7:00 p.m. Field Trips are scheduled in the spring and summer.

Where: Idaho Fish and Game office in Idaho Falls

Contact: Sue Braastad, [braastads at yahoo dot com](mailto:braastads@yahoo.com)

WHITE PINE CHAPTER

Meetings: During the spring and fall, meetings are held once a month. Field trips occur regularly whenever the weather allows. Please check the chapter website for events which may be scheduled or finalized after this issue is printed: www.whitepineinps.org or email the chapter officers at whitepine.chapter@gmail.com.

Contact: James Riser at [jriser11 at gmail dot com](mailto:jriser11@gmail.com) or White Pine Chapter, PO Box 8481, Moscow, ID 83843.

UPCOMING EVENTS

April 28, 8:00 a.m. Full day field trip in the Grande Ronde River canyon, Troy and Flora, Oregon

Leader: Pam Brunsfeld, UI Stillinger Herbarium Manager and Curator

Celebrate Native Plant Appreciation Week enjoying spring wildflowers along the Grande Ronde River with a stop at Field Springs State Park to study flora along an elevation gradient. A species list compiled for this trip over the years consists of several hundred species! We often have great views of wildlife, too.

Meet at Eastside Marketplace in Moscow (south end of the parking lot) at 8:00 a.m. to arrange carpools. This will be a full day field trip with short hikes on fairly level ground. Bring water, lunch, and sunscreen, a flora or field guide, camera and/or binoculars.

May 19, 8:30 a.m. Half-day field trip to Parker Butte Forest and Prairie Remnant

Leader: Emily Poor

Join us for a Palouse Prairie hike on private property—Parker Butte east of Palouse, Washington. There are plenty of trails over 100 acres of mixed ponderosa pine forest and prairie remnants. The prairie is home to some rare species such as Palouse milkvetch, Palouse thistle, and mountain lady slippers. Numerous plants are sure to be in bloom.

Meet at Rosauer's parking lot in Moscow, 8:30 a.m. to arrange carpools. For this half day trip, bring water, sunscreen, and a snack. Field guide, camera and binoculars are useful, but optional. Trails will likely be over uneven ground.

May 26 (Sat.), 8:00 a.m.–1:00 p.m. White Pine Chapter Plant Sale

Location: Arts Room, 1912 Center, 412 East Third St., Moscow, Idaho (between Adams and Van Buren). Arts Room is in the southwest corner of the building next to Fiske Room.

Sale setup Friday evening, May 25.

For more information contact one of the officers or check the White Pine website.

June 7, 6:00 p.m. White Pine Chapter Arboretum visit and potluck picnic

Location: Meet at the barn, south end of the UI Arboretum

Leader: Paul Warnick

We'll tour the native and xeric sections to see what is blooming. Hopefully we will be treated to MacFarlane's four o'clock (*Mirabilis macfarlanei*) in bloom. Bring a chair, drinks and a dish to share.

INPS CHAPTERS

UPPER SNAKE CHAPTER

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Vice President: Sue Braastad
Secretary: Alan Crockett
Treasurer: Dave Godfrey
Members at Large: Mark & Donna Whitman

WHITE PINE CHAPTER

whitepine.chapter@gmail.com

President: James Riser
Vice President: VACANT
Secretary: Pat Fuerst
Treasurer: Elisabeth Brackney
Past President: Helen Yost
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Publicity Chair: VACANT
Web: Nancy Miller, Patricia Hine
www.whitepineinps.org

WOOD RIVER CHAPTER

P.O. Box 3093
Hailey, ID 83333
President: Carol Blackburn
Vice President: VACANT
Secretary: VACANT
Treasurer: VACANT



Bluebells, West Mountains near Cascade. Photo: Jane Rohling



Celebrate Native Plant Appreciation Week with INPS April 29–May 5

INPS Chapters will be planning events around the state. Be sure and let us know how your chapter celebrates Native Plant Appreciation Week. Share your activities on the INPS website or send an article for the next Sage Notes.



Arrowleaf balsamroot against a backdrop of snow-capped mountains signify spring in much of Idaho. Photo by Jane Rohling

THE YEAR OF THE PENSTEMON

The penstemons (or beardtongues) are among the most beautiful of western wildflowers. Because they are fairly drought tolerant, they do very well in local gardens.

There are over 50 species of penstemon listed in the *Flora of the Pacific Northwest*, many of which occur in Idaho. Many consider this genus to be a taxonomically difficult group, but Pam Brunsfeld, University of Idaho Stillinger Herbarium Manager and Curator, who considers Penstemon to be her favorite genus, will conduct a workshop to assist us in learning to identify diagnostic features of the genus.

Pam will lead two follow-up trips to view numerous species in the field. Attend one, two, or all three events.

June 28, 7:00 p.m. Penstemon Workshop

Leader: Pam Brunsfeld, UI Stillinger Herbarium Manager and Curator

Location: Room 209, CNR Building, UI, Moscow Idaho

Please join us for this Penstemon workshop. Fresh flowers from the three major groups of penstemon will be available for dissection with dissecting microscopes. Bring your copy of Hitchcock and Cronquist if you have one.

June 30, 8:00 a.m. Penstemon Field Trip

Location: Grangeville/White Bird area (full day trip)

Leader: Pam Brunsfeld, UI Stillinger Herbarium Manager and Curator

Our first field trip to view blooming penstemons will be to the Grangeville and White Bird area. This is a full day field trip as the Grangeville area is about a 2.5 hour drive from Moscow.

Meet at Eastside Marketplace in Moscow, south end of the parking lot, at 8:00 a.m. to arrange carpools. Bring water, lunch, sunscreen and other appropriate field gear. Cameras and binoculars are useful, but optional. Hikes are not long but may be over uneven ground.

August 4, 8:00 a.m. Penstemon Field Trip: a full day outing to the St Joe/St. Joe Baldy area

Leader: Pam Brunsfeld, UI Stillinger Herbarium Manager and Curator

We'll view some of the later-blooming and larger-flowered group I penstemons that are well represented in this area.

Meet at Rosauer's parking lot in Moscow at 8:00 a.m. to arrange carpools. Please bring water, lunch, sunscreen and appropriate field gear. Field guides, cameras, binoculars are useful, but optional. Short hikes but may be over uneven ground.

RECENT EVENTS

March 22: "Untangling the web: Understanding patterns of diversification in the genus *Mertensia*"

Mare Nazaire, Ph.D. candidate and Assistant Curator of the Owenby Herbarium at Washington State University gave a talk describing her research on the genus *Mertensia*, the bluebells. She presented a concise overview of her phylogenetic research on the relationships of the many species of *Mertensia*. Mare has collected many of the species native to the western US, and she spent time in China collecting some of the Asian *Mertensia* species. Additionally, her collaborators have sent her collections from China and the Arctic. This has allowed Mare to make the first comprehensive molecular investigations of this genus. Idaho has at least eight native species of *Mertensia* and Mare gave an overview of each of these. She also discussed species definitions in this group. We look forward to seeing the results of Mare's research and what she is able to tell us about bluebell relationships.

WOOD RIVER CHAPTER

Contact: Carol Blackburn at blackburncrl@yahoo.com for information on activities and gatherings.

You *must* get it right!

Edible and Poisonous Plants of Idaho

Article and photos by Nancy Miller

White Pine chapter members joined others from the University of Idaho and the local community at an excellent presentation on “Edible and Poisonous Plants of Idaho” given by Brian Elliott and arranged by Dave Tank of the UI Stillinger Herbarium. Brian’s slide presentation and discussion was in two parts. The first dealt with about 25 species, some of whose parts are edible (if the plant is properly identified and if it is properly prepared). The second section dealt with about 16 poisonous species one might commonly encounter and impressed on everyone the poisonous properties of these plants and the type of toxicity or reaction one would experience. He discussed the risks involved with using wild plants and the mistakes that could lead to illness and even death (misidentification, common misconceptions, historical use, animal as opposed to human use, pesticides, allergic reactions, etc).

Brian’s book, *Handbook of Edible and Poisonous Plants of Western North America*, published in 2009, is similarly divided into two sections. The first section deals with edible plants and the second section with poisonous plants. Each part is arranged alphabetically by both plant family and scientific name within the family so that the reader can view family characteristics.

The book has an excellent index of both botanical and common names making it easy to find a particular plant. It contains information from many scientific sources and references. Specific cautions are underlined for emphasis and noted with the species. This book does not have line drawings or photographs and is not designed to be a plant identification manual or guide, but it is a valuable resource once one has used the dichotomous keys of a plant identification manual to correctly identify a plant. Brian’s book is definitely a handbook which those who forage for edible wild plants, no matter their level of experience, will want to have in their possession when out in the field. The book can be ordered using the contact information on the EEC website: www.elliottconsultingusa.com.



Brian Elliott (above right) earned his undergraduate degrees at the University of Idaho and a master’s degree from the University of Wyoming. He and his wife currently operate their own company Elliott Environmental Consulting (EEC).

The White Pine Chapter appreciated Brian’s willingness to provide time for many questions during the presentation and especially for remaining longer in Moscow in order to present this workshop.

We also want to thank Pamela Brunfeld for pulling the many herbarium specimen sheets for workshop participants to study.





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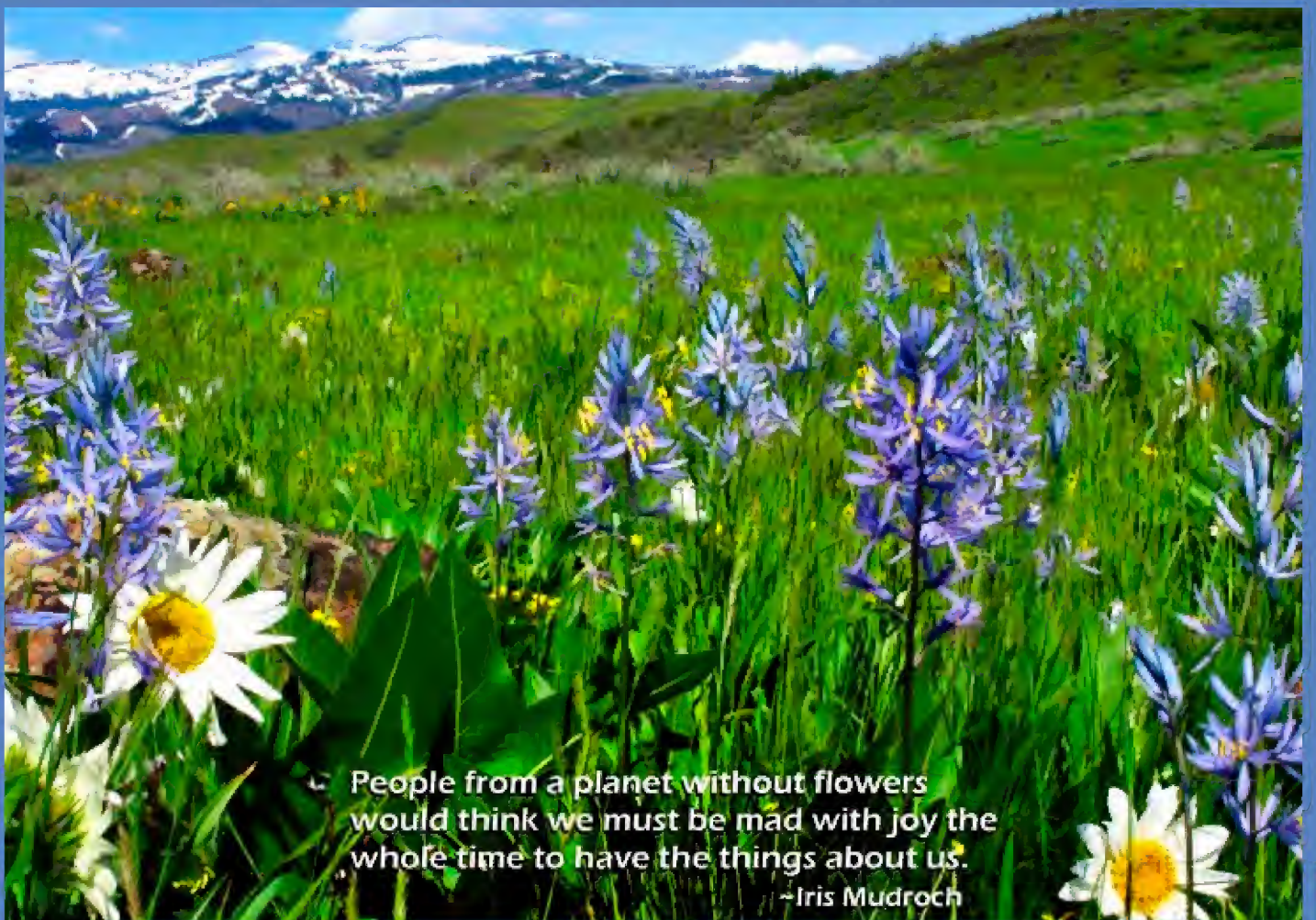
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~Iris Murdoch

Iris Murdoch quote is from "A Fairly Honourable Defeat"

Hwy. 95 near Cambridge, ID Photo by Jane Rohling